

# PROCEEDINGS

OF THE

## American Forestry Association



AT THE

Summer Meeting, held in Quebec, September 2—5, 1890,

AND AT THE

Ninth Annual Meeting, held in Washington, December 30, 1890.

---

WASHINGTON, D. C.

Secretary's Office, 1429 New York Ave.

1891.

---

**NOTE.**—*The American Forestry Association, whether inviting persons to read papers from its platform, or publishing those papers afterwards in connection with its proceedings, is not to be understood as endorsing the views expressed, or adopting them as its own. It offers its platform for the purpose of promoting a free and full discussion of all questions of importance connected with the subject of Forestry.*

---

## CONTENTS.

Officers of the Association. . . . .	4
Members. . . . .	5
Constitution and By-Laws. . . . .	9
Minutes of the Quebec Meeting. . . . .	11
Report of the Executive Committee. . . . .	14
Report of the Committee on Legislation. . . . .	19
Minutes of the Washington Meeting. . . . .	28
Supplemental Report of the Executive Committee. . . . .	29
PAPERS :	
The Forest as a National Resource. . . . <i>B. E. Fernow.</i>	36
Report on the Administration of the Public Forests of Quebec. . . . . <i>E. E. Taché.</i>	53
Rocky Mountain Forests. . . . <i>Col. Edgar T. Ensign.</i>	60
Forest Administration in France. . . . <i>H. L. de Vilmorin.</i>	64
Tree Planting on the Prairies. . . . <i>Hon. H. G. Joly.</i>	68
Systematic Timber-cutting in Quebec. . . . <i>J. X. Perrault.</i>	70
Effect of Forest Mismanagement on Orchards. <i>B. E. Fernow.</i>	75
Forestry at the Dominion Experimental Farms. <i>John Craig.</i>	78
Forestry on the Western Plains of Canada. <i>William Saunders.</i>	81
Minnesota Woodsmen. . . . . <i>H. B. Ayres.</i>	84
Forests in their Relation to Public Health. <i>Dr. Peter H. Bryce.</i>	85
Forest Preservation and Restoration. . . . <i>J. C. Chapais.</i>	96
What Causes the Cyclones. . . . <i>Mrs. S. W. Dodds, M. D.</i>	98
The Preservation of Small Forests. . . . <i>Dr. N. H. Eggleston.</i>	102
Experiments with Southern Trees in the Far North. <i>Auguste Dupuis.</i>	105
Shade and Ornamental Trees for Cities. . . . <i>George Moore.</i>	108

## OFFICERS FOR 1890-91:

*President:* **WILLIAM ALVORD**, San Francisco, California.

### *Vice-Presidents:*

**HON. H. G. JOLY**,  
Point Platon, Quebec.  
**DR. CHARLES MOHR**,  
Mobile, Ala.  
**D. M. RIORDAN**,  
Flagstaff, Ariz. Ty.  
**ABBOT KINNEY**,  
Lamanda, Cal.  
**GEORGE H. PARSONS**,  
Colorado Springs, Col.  
**DR. B. G. NORTHROP**,  
Clinton, Conn.  
**HON. C. R. PRINGLE**,  
Sandersville, Ga.  
**GEORGE W. MINIER**,  
Minier, Ill.  
**PROF. JAMES TROOP**,  
Lafayette, Ind.  
**C. L. WATROUS**,  
Des Moines, Io.  
**PROF. E. A. POPENOE**,  
Manhattan, Kan.  
**HON. A. M. BROWN**,  
Elizabethtown, Ky.  
**JOHN E. HOBBS**,  
North Berwick, Me.  
**J. D. W. FRENCH**,  
Boston, Mass.  
**PROF. W. J. BRAL**,  
Lansing, Mich.  
**HON. C. C. ANDREWS**,  
St. Paul, Minn.  
**PROF. WILLIAM TRELEASE**,  
St. Louis, Mo.

**ROBERT W. FURNAS**,  
Brownville, Neb.  
**J. B. HARRISON**,  
Franklin Falls, N. H.  
**W. A. STILES**,  
Deekerton, N. J.  
**MORRIS K. JESUP**,  
New York, N. Y.  
**PROF. W. R. LAZENBY**,  
Columbus, O.  
**E. W. HAMMOND**,  
Wimer, Ore.  
**HERBERT WELSH**,  
Philadelphia, Pa.  
**L. D. DAVIS**,  
Newport, R. I.  
**PROF. H. A. GREEN**,  
Chester, S. C.  
**PROF. CHARLES A. KEFFER**,  
Brookings, S. D.  
**COL. THOMAS T. WRIGHT**,  
Nashville, Tenn.  
**W. GOODRICH JONES**,  
Temple, Tex.  
**DR. HIRAM A. CUTTING**,  
Lunenburg, Vt.  
**H. C. PUTNAM**,  
Eau Claire, Wis.  
**HON. EDWIN WILLETS**,  
Washington, D. C.  
**HON. G. W. ALLAN**,  
Toronto, Ont.

*Treasurer:* **HENRY M. FISHER, M. D.**, 317 S. 12th St., Philadelphia, Pa.

*Recording Sec'y:* **DR. N. H. EGLESTON**, Dep't of Agriculture, Washington, D. C.

*Cor. Sec'y:* **EDWARD A. BOWERS**, 1429 New York Ave., Washington, D. C.

### *Executive Committee:*

**B. E. FERNOW**, *Chairman*,  
**H. B. AYRES**,  
**CHARLES C. BINNEY**,

**COL. E. T. ENSIGN**,  
**HON. WARREN HIGLEY**,  
**HENRY E. PELLEW**,  
[With the Officers of the Association.]

### *Committee on Publication and Membership.*

**CHARLES C. BINNEY**, *Chairman*,  
**HENRY M. FISHER, M. D.**,  
**J. D. W. FRENCH**,

**W. A. STILES**,  
**HERBERT WELSH**.

### *Arbor Day Committee.*

**DR. B. G. NORTHROP**, *Chairman*,  
**HON. STERLING J. MORTON**,  
**DR. N. H. EGLESTON**,

**HON. B. L. GOULDING**,  
**W. GOODRICH JONES**.

*Annual Dues, \$2.*

*Life Membership, \$50.*

Admission to membership can be effected by applying to **CHARLES C. BINNEY**, Chairman of Membership Committee, 218 South 4th Street, Philadelphia, Pa.

Other communications should be addressed to the Corresponding Secretary

# MEMBERS.

† Life Members on new plan.

\* Old Life Members.

## ALABAMA.

Cullman, John G., Cullman.  
Mohr, Dr. Chas., Mobile.

## ARIZONA TY.

Riordan, D. M., Flagstaff.

## CALIFORNIA.

† Alvord, William, San Francisco.  
Alvord, Mrs. William, San Francisco.  
Blakeman, Leontine Spotts, 2420 Pacific Ave., San Francisco.  
\* Blanchard, Nathan.  
Brown, F. E. Redlands.  
Brown, Thomas, 1019 Bush St., San Francisco.  
\* Fernald, Hon. Charles, Santa Barbara.  
Garden, Jonathan H., Park Conservatory, San Francisco.  
Keeney, Charles M., 2423 Fillmore St., San Francisco.  
Keeney, Miss Ethel S., 2423 Fillmore St., San Francisco.  
Keeney, James W., M. D., 2220 Clay St., San Francisco.  
Keeney, Miss Mary A., 2220 Clay St., San Francisco.  
Kinney, Abbott, Lamanda.  
McLaren, John, Golden Gate Park, San Francisco.  
Rock, John, San Jose.  
Wright, B. C., 1703 Gough St., San Francisco.

## COLORADO.

Ehrich, Louis R., Colorado Springs.  
Ensign, Edgar T., Colorado Springs.  
Parsons, George H., Colorado Springs.  
Titcomb, John S., Denver.  
Van Diest, P. H., Denver.

## CONNECTICUT.

Alsop, Dr. J. W., Middletown.  
Brewer, Prof. W. H., 418 Orange St., New Haven.  
\* Gold, T. S., West Cornwall.  
Northrop, Dr. B. G., Clinton.  
Williams, F. W., New Haven.

## FLORIDA.

Clubbs, A. V., Pensacola.  
Keyser, Mrs. W. J., Milton.  
Marks, N. R., Orlando.

## GEORGIA.

Bacon, D. C., Savannah.  
Bullock, Hon. Rufus V., Atlanta.  
McLendon, S. G., Thomasville.  
Pringle, Hon. C. R., Sandersville.  
Reppard, R. B., Savannah.  
Root, Sidney, Atlanta.  
Tift, Nelson, Albany.

## ILLINOIS.

Deering, Chas. W., 16 Fullerton Ave., Chicago.  
Hill, D., Dundee.  
Minier, Geo. W., Minier.  
\* Peterson, P. S., Box 383, Chicago.  
Sidway, L. B., 59 Dearborn St., Chicago.

## INDIANA.

Ratliff, J. C., Richmond.  
Troop, Prof. James, Lafayette.

## IOWA.

Watrous, C. L., Des Moines.

## KANSAS.

Mason, S. C., Manhattan.  
Popenoe, Prof. R. A., Manhattan.

## KENTUCKY.

Brown, Hon. A. M., Elizabethtown.  
Hayes, W. H., Bardstown Junction.  
Logan, A. H., Shelbyville.

## MAINE.

Hammond, Geo. W., Yarmouthville.  
\* Hobbs, John E., North Berwick.  
Hobbs, Miss Elizabeth K., North Berwick.  
\* Jackson, Thomas, Portland.  
Jewett, Miss Sarah O., South Berwick.  
Talbot, Hon. G. P., Portland.

## MASSACHUSETTS.

Appleton, Francis H., 251 Marlborough St., Boston.  
† Beebe, E. Pierson, 36 Temple Place, Boston. Box 1723 P. O.  
\* Bowditch, James H., 68 Devonshire St., Boston.  
† Brewer, W. F., Hingham.  
Brooks, Henry, 97 Beacon St., Boston.  
Brooks, P. C., 7 Arlington St., Boston.

## MASSACHUSETTS.—Continued.

- Burnett, Joseph, 27 Central St., Boston.  
 Carter, John W., 172 Columbus Ave., Boston.  
 Chaplin, H. W., 87 Milk St., Boston.  
 Chase, George B., 234 Beacon St., Boston.  
 Codman, Henry S., Brookline.  
 \*Doane, Thomas, Charlestown.  
 \*Fay, Joseph S., Wood's Holl.  
 †Fay, Miss Sarah B., Wood's Holl.  
 Flagg, Augustus, care Little, Brown & Co., Boston.  
 French, John D. W., 42 Commonwealth Ave., Boston.  
 †Gardner, John L., 22 Congress St., Boston.  
 \*Ginn, Edwin, Tremont Place, Boston.  
 Hunnewell, H., 87 Milk St., Boston.  
 Jackson, Robert T., 33 Gloucester St., Boston.  
 Kidder, Nathan T., Milton.  
 †Leeson, J. R., Box 2221, Boston.  
 Lodge, Rich. W., Mass. Inst. of Technology, Boston.  
 \*Low, John, Chelsea.  
 Mason, Miss E. F., 1 Walnut St., B'st'n.  
 \*May, John J., Box 2348, Boston.  
 Morse, Anson D., Amherst.  
 Olmsted, Frederick N., Brookline.  
 Olmsted, J. C., Brookline.  
 Paine, R. T., 6 Joy St., Boston.  
 Peabody, Oliver W., care Kidder, Peabody & Co., Boston.  
 \*Rollins, Wm. Herbert, 252 Marlborough St., Boston.  
 Russell, H. S., Milton.  
 Saltonstall, Henry, 26 Commonwealth Ave., Boston.  
 Shaw, Francis, 1 Joy St., Boston.  
 \*Smith, Benjamin G., Cambridge.  
 Stevens, Mrs. Moses T., North Andover.  
 Strong, William C., Waban.  
 \*Waters, Edwin F., 131 Newbury St., Boston.  
 \*Wheildon, William W., Concord.  
 White, Dr. James C., 259 Marlborough St., Boston.  
 Williams, John D., 160 State St., Boston.  
 Woods, John M., 86 Canal St., Boston.

## MICHIGAN.

- Beal, Prof. W. J., Agricultural College, Lansing.  
 \*Mathieu, Jean A., 52 Moffat Block, Detroit.

## MINNESOTA.

- \*Andrews, Hon. C. C., St. Paul.  
 Chute, Richard, Minneapolis.  
 \*Jewell Nursery Co., S. E. Emery, Secretary, Lake City.  
 \*Sewall, Jos. S., 46 Gilfillan Block, St. Paul.  
 Weyerhauser, Fred'k, 435 Summit Ave., St. Paul.  
 Winchell, N. H., Minneapolis.

## MISSOURI.

- Kern, M. J., 705 Olive St., St. Louis.  
 Trelease, Prof. William, St. Louis.

## NEBRASKA.

- Bennett, J. M., Hebron.  
 Furnas, Robert W., Brownville.  
 \*Morton, Hon. J. Sterling, Nebraska City.

## NEW HAMPSHIRE.

- Bellows, Russell, Walpole.  
 Harrison, J. B., Franklin Falls.

## NEW JERSEY.

- Davis, Samuel D., Lakewood. (44 Wall St., N. Y.)  
 Dawes, Lewis C., Englewood.  
 Girtanner, Jules, Linden.  
 Peters, Rev. John E., Sc. Doc., Pleasantville.  
 Stiles, W. A., Deckerton; Garden & Forest Pub. Co., Tribune Bldg., New York.

## NEW YORK.

- Adams, Chas. K., Ithaca.  
 \*Bishop, Heber R., 993 Fifth Ave., New York.  
 Crary, J. D., 72 Wall St., New York.  
 Cutting, W. Bayard, 32 Nassau St., New York.  
 DeForest, Robert W., 120 Broadway, New York.  
 Deming, William B., 52 Exchange Place, New York.  
 Dolge, Alfred, Dolgeville.  
 \*Dudley, P. H., 54 Pine St., New York.  
 \*Hicks, John S., Roslyn, L. I.  
 Higley, Hon. Warren, 55 Br'way, N. Y.  
 Hildebrand, Wilhelm, 1 Br'way, N. Y.  
 Hubbard, R. J., Cazenovia.  
 Jesup, Morris K., 52 William St., New York.  
 Kelsey, Frederick W., 208 Broadway, New York.  
 King, John A., Great Neck, L. I.  
 Ledyard, L. W., Cazenovia.

## NEW YORK—Continued.

Marić, Peter, 48 W. 19th St., New York.  
 Martin, Edmund P., 169 S. Oxford St., Brooklyn.  
 Meyer, L. H., Box 208, New York.  
 †Palmer, Wm. J., 32 Nassau St., New York.  
 Pellew, Henry E., Katonah, (1637 Mass. Ave., Wash., D. C.)  
 Pinchot, Gifford, 2 Gramercy Park, New York.  
 Potts, Wm., 56 Wall St., New York.  
 Prentiss, Prof. A. N., Cornell University, Ithaca.  
 Preston, George R., Cazenovia.  
 Rose, A. P., Geneva.  
 Starr, Walter D., 14th St. and 10th Ave., New York.  
 Stephens, W. Hudson, Lowville.  
 \*Thayer, Dr. W. A., Cooperstown.  
 Thomson, Lemon, 8 Ten Broeck St., Albany.  
 Tratman, E. E. Russell, C. E., 103 Tribune Building, N. Y.  
 †Vanderbilt, George W., 640 Fifth Ave., New York.  
 Wilson, Gen. James Grant, 15 E. 74th St., New York.

## OHIO.

\*Bambach, George, Ripley.  
 \*Fisher, W. Hubbell, Cincinnati.  
 Gamble, James N., Cincinnati.  
 Gano, John A., Cincinnati.  
 Lazenby, Prof. William R., Experiment Sta., Columbus.  
 Orton, Prof. Edward, State Geological Survey, Columbus.  
 Poindexter, Rev. James, Columbus.  
 \*Read, Prof. M. C., Hudson.  
 \*Springer, Dr. A., Cincinnati.  
 \*Steele, Robt. W., Dayton.  
 \*Townshend, N. S., Columbus.  
 \*Warder, Reuben H., North Bend.  
 Wultz, Leo., Wilmington.

## OREGON.

Hammond, E. W., Wimer.

## PENNSYLVANIA.

Anders, Dr. J. M., 1637 N. Broad St., Phila.  
 Beale, Edw. F., Jr., 231 S. Front St., Phila.  
 Beaver, Hon. James A., Bellefonte.  
 Binney, Chas. C., 218 S. 4th St., Phila.  
 Coates, Geo. M., 1817 De Lancey Pl., Phila.  
 Cox, Mrs. Brinton, 1711 Locust St., Phila.

## PENNSYLVANIA—Continued.

Coxe, Mrs. E. B., Drifton.  
 Edge, Thos. J., Harrisburg.  
 Elwyn, Rev. A. L., 1422 Walnut St., Phila.  
 Fisher, Dr. Henry M., 317 S. 12th St., Phila.  
 Hazeltine, Frank, 1825 Walnut St., Phila.  
 Heston, Mrs. Geo. T., Newtown.  
 James, H. F., Franklin.  
 Jayne, H. LaBarre, 505 Chestnut St., Phila.  
 Jones, Horatio G., 135 S. Fifth St., Phila.  
 †Lea, Henry C., 2000 Walnut St., Phila.  
 Lundy, Rev. J. P., 245 S. 18th St., Phila.  
 Lundy, Mrs. J. P., 245 S. 18th St., Phila.  
 \*Peabody, Chas. B., 1415 Spruce St., Phila.  
 Praetorius, Geo. O., Pottsville.  
 Sellers, William, 1600 Hamilton St., Phila.  
 Walker, William, 45 S. 3rd St., Allegheny.  
 Welsh, Herbert, 1305 Arch St., Phila.  
 Wolfe, Dr. Samuel, 1624 Diamond St., Phila.

## RHODE ISLAND.

Davis, L. D., 207 Thames St., Newport.  
 Emmons, Arthur B., Newport.  
 Mason, Miss Ida, Rhode Island Ave., Newport.

## SOUTH CAROLINA.

Atkinson, Prof. Geo. F., Columbia.  
 Green, Prof. H. A., Chester.  
 Lawton, Hon. John, Lawtonville.  
 McKie, Thos. J., Wood Lawn.

## SOUTH DAKOTA.

Keffer, Prof. Chas. A., Brookings.

## TENNESSEE.

Goulding, B. L., Chattanooga.  
 Wright, Col. Thos. T., Nashville.

## TEXAS.

Jones, W. Goodrich, Temple.

## VERMONT.

Battell, Jos., Middlebury.  
 Cutting, Hiram A., Lunenburg.

## WISCONSIN.

Putnam, H. C., Eau Claire.

## DISTRICT OF COLUMBIA.

- \*Abbe, Prof. Cleveland, Washington.  
 †Ayres, H. B., Dept. of Agriculture.  
 Bowers, Edw. A., 1429 N. Y. Ave.  
 Dickson, Dr. S. H., 1728 I St., N. W.  
 Eggleston, Dr. N. H., Dept. of Agriculture.  
 Fernow, Bernhard E., Dept. of Agriculture.  
 Fernow, Mrs. B. E., Washington.  
 Riley, Prof. C. V., 1714 13th St., Washington.  
 Robbins, Mrs. M. A., Dept. of Agriculture.  
 \*Warder, Prof. Robert B., Howard University.  
 Willets, Hon. Edwin, Dept. of Agriculture.

## ONTARIO.

- Allan, Hon. G. W., Toronto.  
 Blue, Hon. A., Dept. of Agriculture, Toronto.  
 Bryce, Dr. Peter H., Toronto.  
 Craig, John, Dominion Exp. Farm, Ottawa.  
 \*Denton, John M., London.  
 Heneker, R. W., Sherbrooke.  
 Morgan, J. H., Amherstburg.

## ONTARIO—Continued.

- Saunders, Prof. Wm., Ottawa.  
 Thane, E. S., Ottawa.  
 White, A., Dept. of Crown Lands, Toronto.

## QUEBEC.

- Barnard, E. A., Dept. of Agriculture, Quebec.  
 Barth, Ulric, Quebec.  
 Beaubien, Hon. Lewis, Montreal.  
 Campbell, Archibald, Quebec.  
 Department of Crown Lands, Felix Campeau, Accountant, Quebec.  
 \*Drummond, A. F., Montreal.  
 Greenough, W. P., Pontneuf.  
 Joly, Hon. H. G., Pointe Platon.  
 LeMoine, J. M., Quebec.  
 \*Little, Wm., Montreal.  
 Moore, Geo., Montreal.  
 Moore, H. D., Moore's Sta.  
 Perrault, Hon. J. X., Montreal.  
 Price, H. M., Quebec.  
 Robitaille, Hon. L. A., Quebec, Box 742.  
 Ross, Hon. David, Quebec.  
 Ross, W. J., Quebec.  
 Shanley, Walter, Montreal.  
 Turner, Richard, Quebec.



